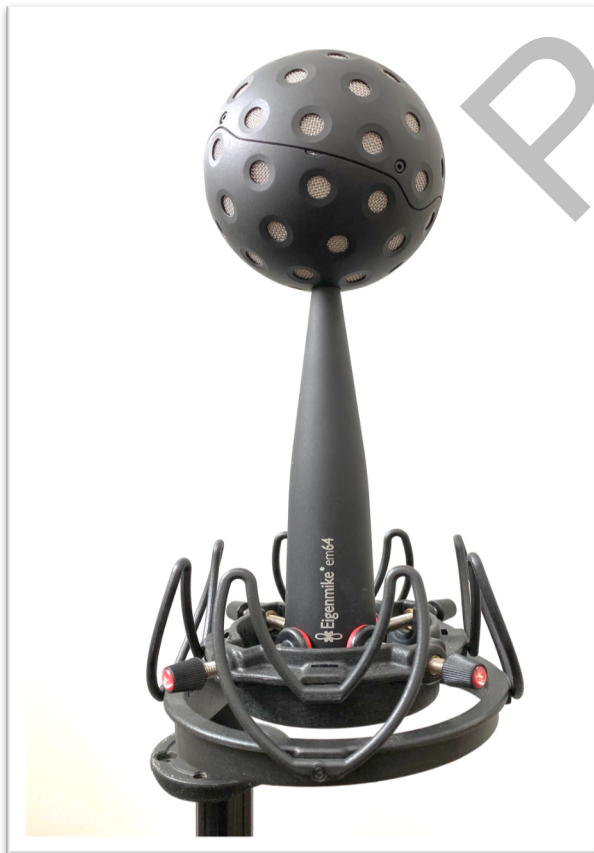# em64 Eigenmike® Microphone Array

## General Description

mh acoustics' em64 Eigenmike® spherical microphone array contains 64 professional-grade electret microphones mounted on a rigid spherical baffle. All electronics are contained inside the sphere. The patented design decomposes the soundfield into spherical harmonics (HOA signals) of up to sixth-order. General beamformer outputs are efficiently computed and steered to any desired direction. The em64 is powered by a standard Power-over-Ethernet (PoE) ethernet cable and uses Audinates' Dante protocol over standard ethernet networks. mh acoustics' native EigenStudio® application (macOS or Windows) or EigenUnits® plugins process the microphone array output signals to form the spherical harmonic HOA basis signals and/or up to any number of desired output beampattern signals.



*em64 Eigenmike® microphone array*

## Technical Data

Microphone capsules: 64 omnidirectional electrets each with input referred noise of 20 dBA

Max SPL (<1% THD): 130 dB SPL

Spherical harmonics (HOA): up to 6-th order via EigenUnits® plugins or EigenStudio® application

Selectable beampatterns: Omnidirectional, Hypercardioid, Supercardioid, Cardioid, Dipole (from 1st to 6th order with EigenUnits® plugins or EigenStudio® application)

Beam steering directions: All spherical angles

Microphone array diameter: 8.4 cm

Frequency response: 20 Hz - 20 kHz

Sampling rate: 48 kHz (192 kHz using PCIe interface)

A/D resolution: 24 bits

HOA Spatial Aliasing cutoff frequency: > 12 kHz

Operating systems: Windows or macOS

Outputs: 64 calibrated microphone channels with Dante virtual sound card. Unlimited beamformer outputs. Software outputs limited to 64 via Dante virtual sound card

Clock Sync: Internal or External Word Clock via Dante

Cable: Standard CAT5E/CAT6 cable

Number of simultaneous em64 units: 8 (Gb ethernet)

Power: Power over Ethernet (PoE). 5 Watts

Options: Windscreen, redundant ethernet

Weight: 0.5 kg (em64)